



Steer, CD. (2008, Dec 18). Comment: Clemons T. A look at the inheritance of height using regression toward the mean. Hum Biol. Jun 2000;72(3):447-454.. Unpublished <http://hdl.handle.net/1983/1254>

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16th February 2005

Dear Editor

Re: Clemons T. A look at the inheritance of height using regression toward the mean. *Hum Biol.*
Jun 2000;72(3):447-454.

I thought Dr. Clemons's article was an interesting application of adjusting for 'measurement error' due to non-paternity. However I think there is a typographical error in equation (13) which should read

$$\Lambda = \begin{pmatrix} \sigma_{ff} & a\sigma_{fm} \\ a\sigma_{fm} & \sigma_{mm} \end{pmatrix}^{-1} \begin{pmatrix} (1-p)\sigma_{ff} & (1-p)\sigma_{fm} \\ \sigma_{fm} & \sigma_{mm} \end{pmatrix}$$

assuming the covariance between biological and non-biological fathers, σ_{cf} (using her notation), is zero. This was stated on p451 and is implied by equation (9). Of course in one of scenarios Dr. Clemons considered, where $a=1-p$, the above and published equations are equivalent.

I think it is also worth re-emphasising two common pitfalls for readers attempting to utilise such techniques. Firstly, the observed covariance between parental heights is σ_{xm} not σ_{fm} , although the two are related $\sigma_{xm} = a\sigma_{fm}$. Secondly, as equation (12) tells us, we need to apply Λ^{-1} to the regression coefficients from OLS to obtain 'unbiased' (or at least consistent) estimates of the parameters.

Yours sincerely

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